

CLAIMS:

1. A method for determining engine torque loss in an internal combustion engine for an engine controlled by a torque control strategy, the method comprising:
  - determining inactive cylinder torque losses of said engine;
  - determining active cylinder torque losses of said engine; and
  - determining an engine torque loss by summing said inactive cylinder torque loss and said active cylinder torque loss.
2. The method of Claim 1 wherein said inactive cylinder torque loss is determined from friction torque loss and pumping torque losses.
3. The method of Claim 1 wherein said active cylinder torque loss is determined from friction torque loss and pumping torque losses.
4. The method of Claim 1 wherein said engine torque loss is further based on engine accessory losses.
5. The method of Claim 1 wherein said inactive cylinder losses and active cylinder losses are based on an engine speed.
6. The method of Claim 1 wherein said inactive cylinder losses and active cylinder losses are based on valve timing in respective cylinders.

7. A method for controlling engine torque in an internal combustion engine, the method comprising:

5 determining a desired brake torque of said engine;

determining engine torque loss based on individual cylinder torque losses in active and inactive cylinders of said engine;

10 determining an indicated engine torque by subtracting said determined engine torque loss from said desired brake torque; and

combusting an air-fuel mixture in said active cylinders to produce said engine indicated torque.

15 8. The method of Claim 7 wherein said individual cylinder torque losses are determined based on an engine speed.

20 9. The method of Claim 7 wherein said active and inactive cylinder losses are based on friction and pumping torque.

10. The method of Claim 7 wherein said engine torque loss is further based on engine accessory losses.

25 11. The method of Claim 7 wherein said indicated torque is further adjusted by a spark torque ratio.

30 12. The method of Claim 7 wherein said indicated torque is further adjusted by an air-fuel torque ratio.

13. The method of Claim 7 wherein said fuel amount and said air amount is determined for each of said active cylinders.

14. The method of Claim 7 wherein said engine torque loss is further based on a cylinder mode factor that is determined based on a cylinder mode.

5 15. The method of Claim 7 wherein said air-fuel mixture is determined for each of said active cylinders.

16. A system for operating an internal combustion engine with electromechanical valves, the system comprising:

10 a cylinder with at least an electromechanical intake valve and at least an mechanically actuated exhaust valve that can be controlled to adjust valve opening and closing events relative to a crankshaft location; and

15 a controller to adjust said electromechanical valve timing and said mechanically actuated valve timing.

17. The system of Claim 25 wherein said mechanically actuated valve timing adjusts the phase of exhaust valve  
20 timing relative to a crankshaft position.

18. A computer readable storage medium having stored data representing instructions executable by a computer to control an internal combustion engine of a vehicle,  
25 said storage medium comprising:

instructions for determining inactive cylinder torque losses of said engine;

determining active cylinder torque losses of said engine; and

30 determining an engine torque loss by summing said inactive cylinder torque loss and said active cylinder torque loss.